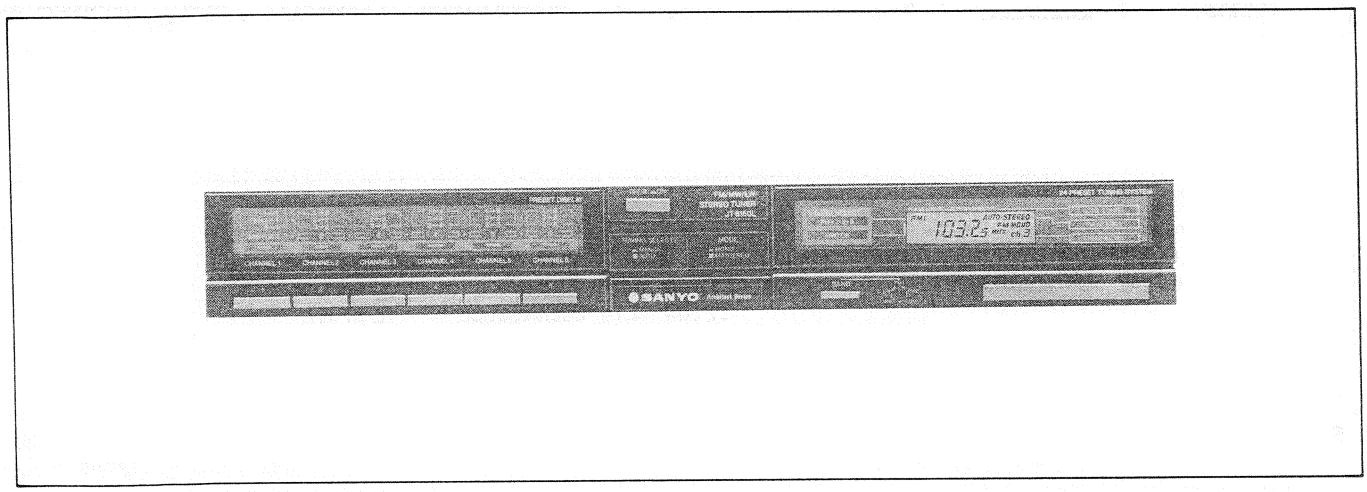
SERVICE MANUAL

AM/FM STEREO TUNER

SANYO

JT 6150L

(WEST GERMANY)



SPECIFICATIONS

Note:
The below mentioned specifications are mainly based on the IHF measurements standard. They can therefore not directly be compared with specifications based on the DIN standard or other standards.

FM section

Frequency range	87.5 – 108 MHz (0.05 MHz steps)
Usable sensitivity	2.0 μV (mono)
Signal to noise ratio (1 mV ANT.)	65 dB (mono)
Harmonic distortion (1 kHz)	0.4% (mono)
Frequency response	30 Hz – 15 kHz (+1/–2 dB)
Stereo separation (1 kHz)	40 dB
Aerial input	75 ohms unbalanced

AM (MW/LW) section

Frequency range	MW: 522 – 1611 kHz (9 kHz steps)
	LW: 144 – 290 kHz (1 kHz steps)
Sensitivity	MW: 500 μV/m, LW: 1000 μV/m

General

Power requirements	DC: 12 V, 260 mA (from JA 6150)
Dimensions (W x D x H)	Approx. 420 x 200 x 61 mm
	(16-1/2" x 7-7/8" x 2-3/8")
Weight	Approx. 1.6 kg (3 lbs. 9 ozs.)

Specifications subject to change without notice.

Reference No. WM-19052

ADJUSTMENT

NOTE: 1. Power source voltage is DC 12V.
2. Use a screw driver with plastic grip for all adjustment.
3. Signal input must be kept as low as possible to avoid overload.
4. Use an output meter of the highest possible sensitivity.
5. Adjust the intermediate frequency of AM and FM to the frequency of ceramic filter.

(1) FM Band

Antenna: 75 ohm open SG direct, standard modulation frequency: 1kHz, Deviation: 75 kHz (MONO)

ADJUSTMENT ITEMS		FREQUENCY INDICATED POSITION	INPUT CONDITIONS		OUTPUT CONDITIONS		ADJUSTING PARTS	STANDARDS
			MEASURING INSTRUMENTS	CONNECTIONS	MEASURING INSTRUMENTS	CONNECTIONS		
IF	V-curve	Lower Limit	FM sweep generator (10.7 MHz non modulation)	TP103 (H) TP104 (E)	FM sweep generator	TP203 (H) TP205 (E)	T201	Max.
	S-curve					TP204 (H) TP205 (E)	T202	Symmetrical Wave Max.
Tuning Coverage	Low	87.5 MHz	—	—	Digital Voltmeter	TP101 (H) TP102 (E)	—	—
	High	108.0 MHz					L104	8.0 ± 0.05V
Tracking	Low	90.0 MHz	FM-SG	TP103 (H) TP104 (E)	VTVM Oscilloscope	Tuner out (L or R)	L101 L102	Max.
	High	106.0 MHz					CT101	
IF (Distortion factor)		98.0 MHz	FM-SG	TP103 (H) TP104 (E)	Digital Voltmeter	TP201 (H) TP202 (E)	T202	2±0.02V
S.D. (Station Detector)		98.0 MHz	FM-SG(21~22dB)	TP103 (H) TP104 (E)	Digital Voltmeter	TP207 (H) TP205 (E)	SVR201	21 dB—High 22 dB—Low
VCO (19 kHz)		98.0 MHz	FM-SG (66 dB)	TP103 (H) TP104 (E)	Counter	TP301 (H) TP302 (E)	SVR302	19kHz±50Hz
Separation		98.0 MHz	FM-SG Stereo Modulator* (66 dB)	TP103 (H) TP104 (E)	VTVM Oscilloscope	Tuner out (L or R)	SVR301	L/R-ratio Max.

* Stereo modulator: Deviation Main (L + R) . . . ±40 kHz
Pilot (19kHz) . . . 6.75 kHz

(2) MW Band

Antenna: IRE Loop antenna, Standard modulation: 1 kHz 30%

ADJUSTMENT ITEMS		FREQUENCY INDICATED POSITION	INPUT CONDITIONS		OUTPUT CONDITIONS		ADJUSTING PARTS	STANDARDS
			MEASURING INSTRUMENTS	CONNECTIONS	MEASURING INSTRUMENTS	CONNECTIONS		
IF		999 kHz	AM Sweep generator (459 kHz non modulation)	TP105 (H) TP106 (E)	AM sweep generator	TP206 (H) TP205 (E)	T203	Max.
Tuning Coverage	Low	522 kHz	—	—	Digital Voltmeter	TP101 (H) TP102 (E)	L151	1.4 ± 0.03V
	High	1611 kHz					CT152	8.0 ± 0.05V
Tracking	Low	603 kHz	AM-SG	Loop ANT.	VTVM Oscilloscope	Tuner out (L or R)	L152	Max.
	High	1404 kHz					CT151	
S.D. (Standard Detector)		999 kHz	AM-SG(82~83dB)	Loop ANT.	Digital Voltmeter	TP207 (H) TP205 (E)	SVR202	82 dB—High 83 dB—Low

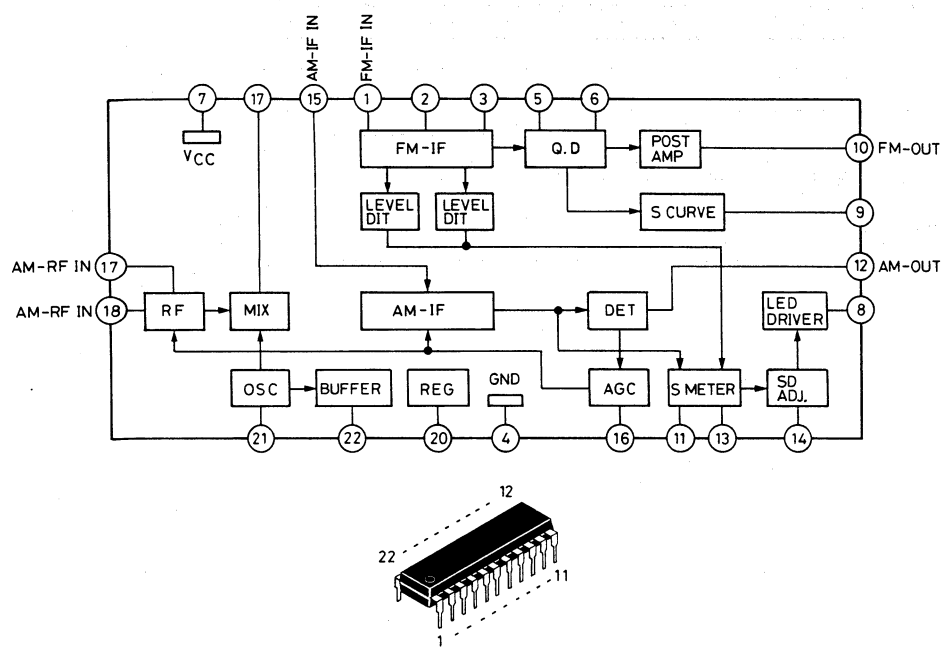
(3) LW Band

Antenna: IRE Loop antenna, Standard modulation: 400 Hz 30%

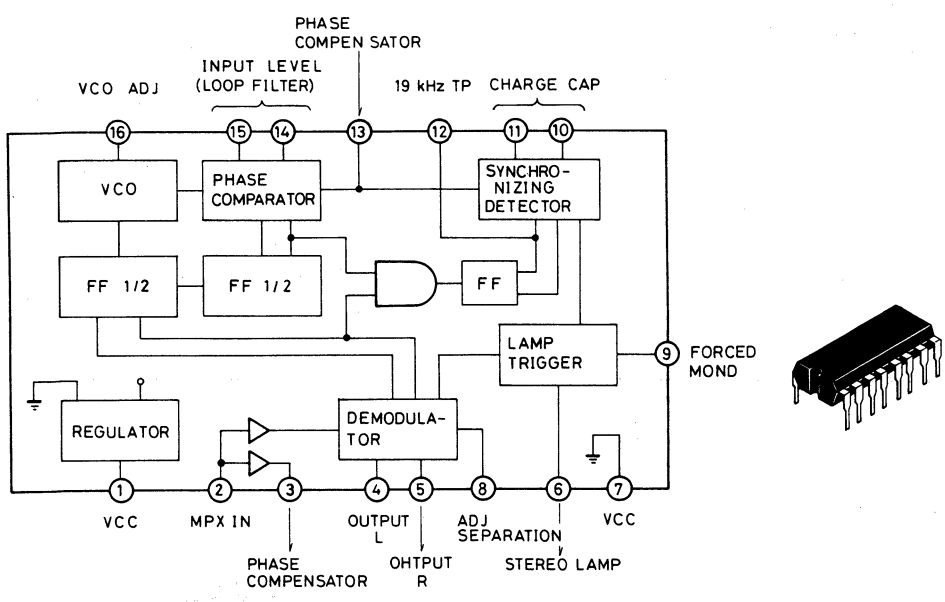
ADJUSTMENT ITEMS		FREQUENCY INDICATED POSITION	INPUT CONDITIONS		OUTPUT CONDITIONS		ADJUSTING PARTS	STANDARDS
			MEASURING INSTRUMENTS	CONNECTIONS	MEASURING INSTRUMENTS	CONNECTIONS		
Tuning Coverage	Low	144 kHz	—	—	Digital Voltmeter	TP101 (H) TP102 (E)	L153	1.6 ± 0.03V
	High	290 kHz					CT154	7.0 ± 0.05V
Tracking	Low	162 kHz	AM-SG	Loop ANT.	VTVM Oscilloscope	Tuner out (L or R)	L154	Max.
	High	279 kHz					CT153	

IC BLOCK DIAGRAMS

IC201 LA1265 (TUNER SYSTEM)

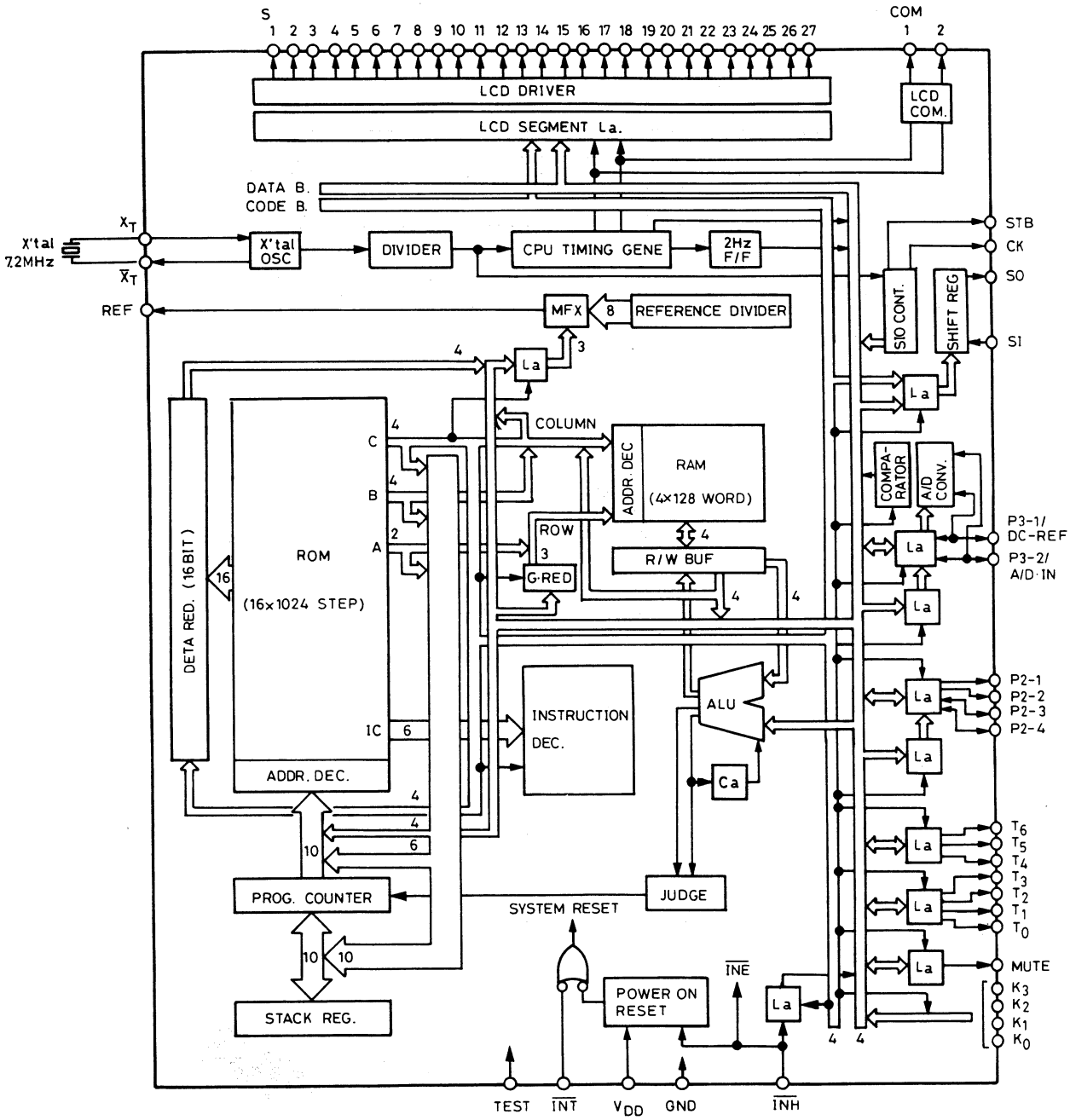


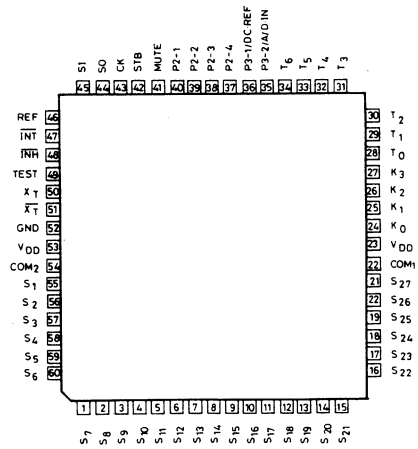
IC301 LA3361 (PLL FM MPX STEREO DEMODUDLATOR)

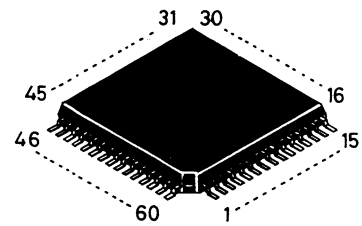


IC BLOCK DIAGRAMS

IC401 . . . . . TC9302AF (Digital Tuning System with LCD Drive)

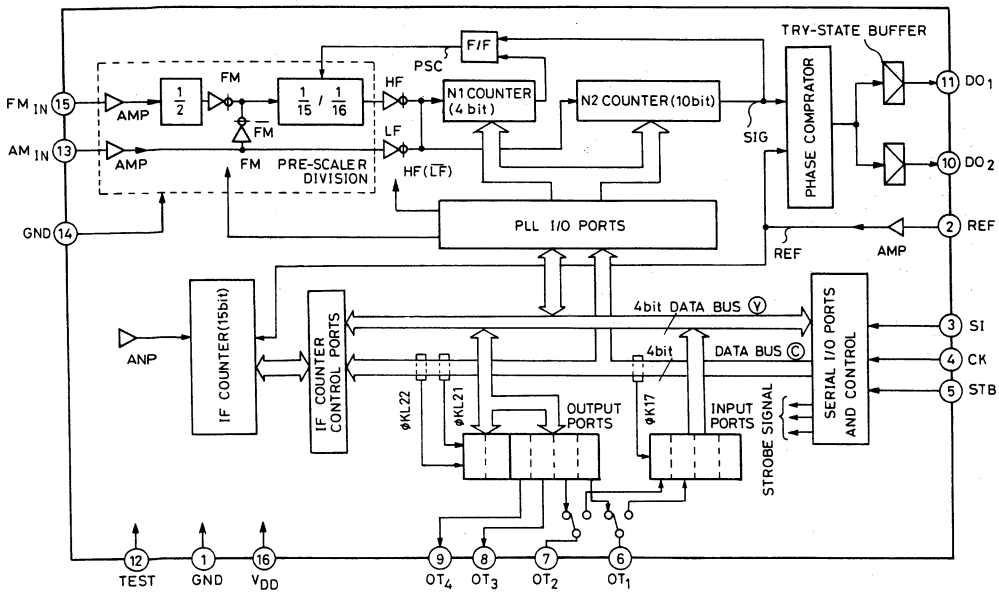


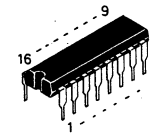

SI SO CK STB MUTE P2-1 P2-2 P2-3 P2-4 P3-1/DC REF P3-2/A/D IN T6 T5 T4 T3
REF INT INH TEST XT XT GND VDD COM2 S1 S2 S3 S4 S5 S6
T2 T1 T0 K3 K2 K1 K0 VDD COM1 S27 S26 S25 S24 S23 S22
S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21

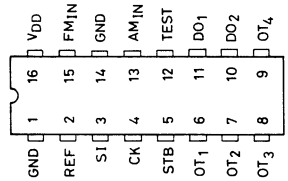


IC BLOCK DIAGRAMS

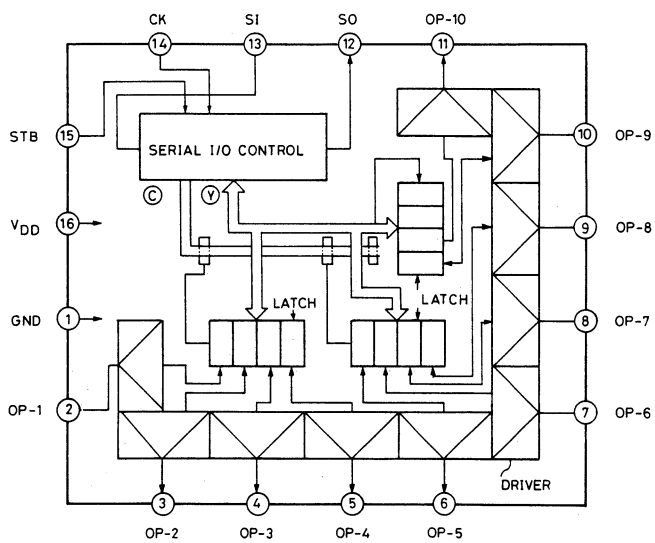
IC402 TC9172P (HIGH-SPEED PLL WITH PRE-SCALER)

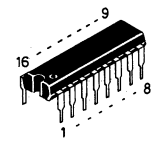


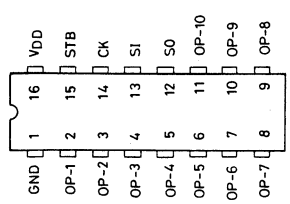




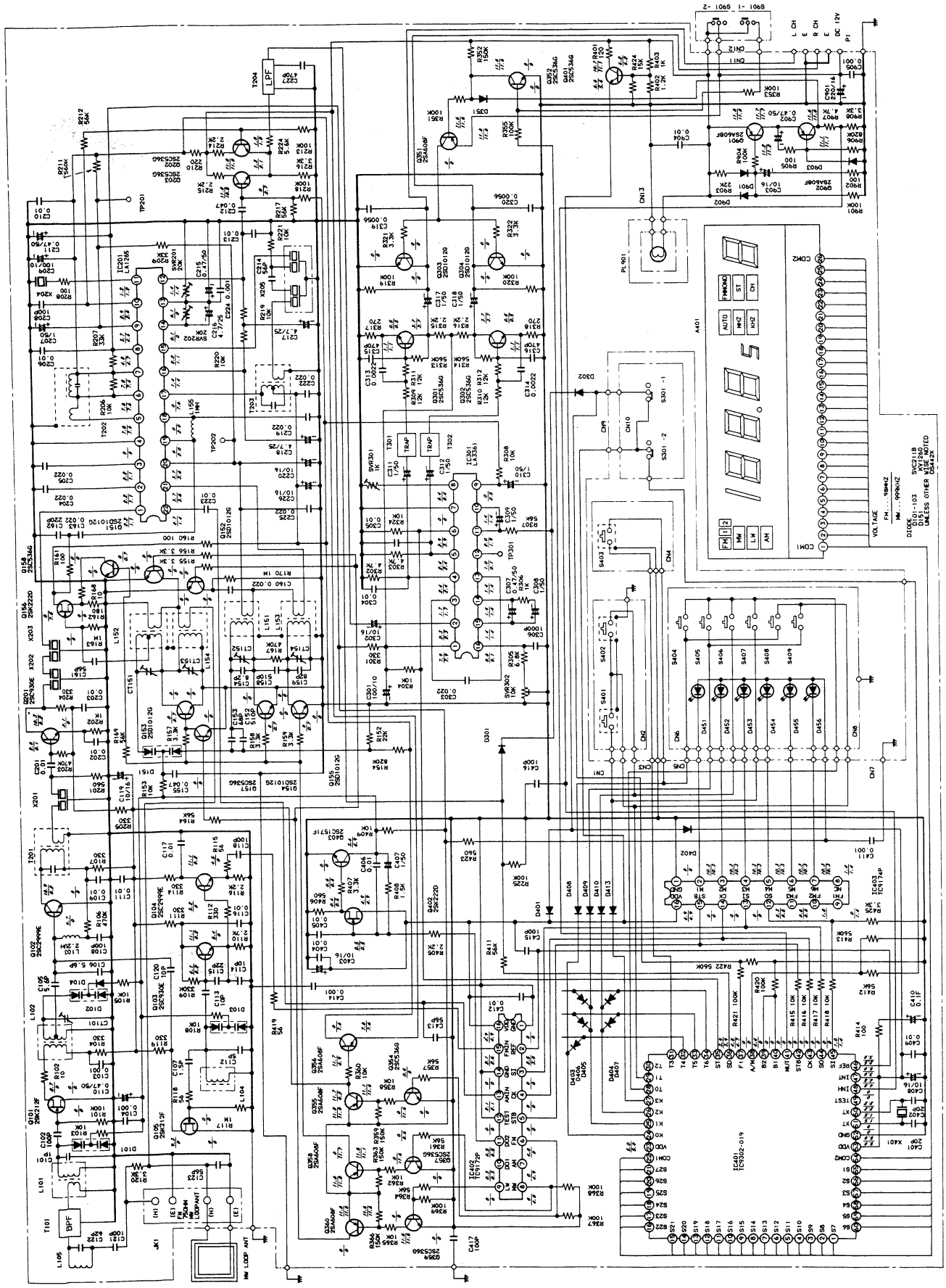
IC403 TC9174P (INTER-FACE=EXTENSION OF I/O PORTS)



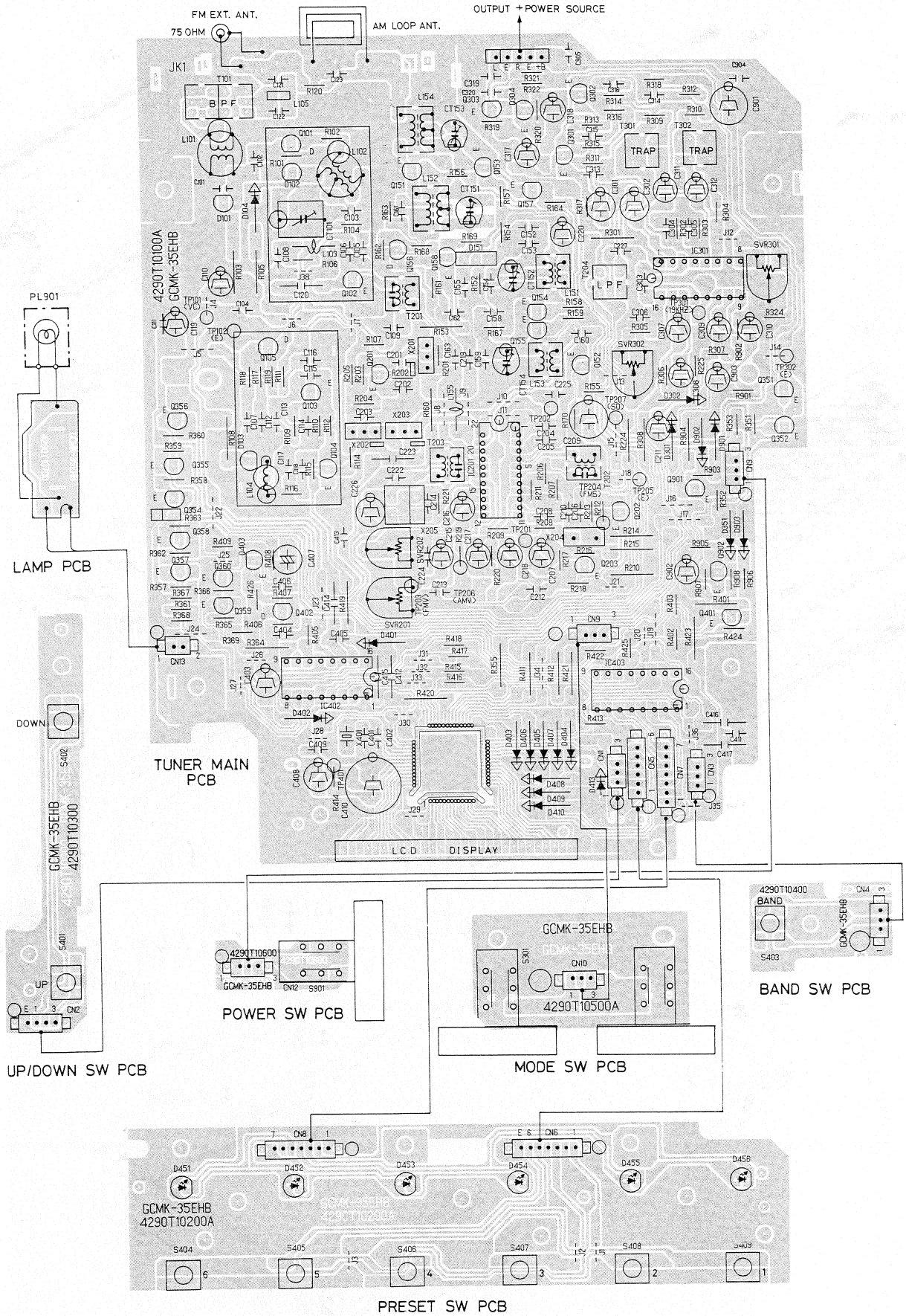




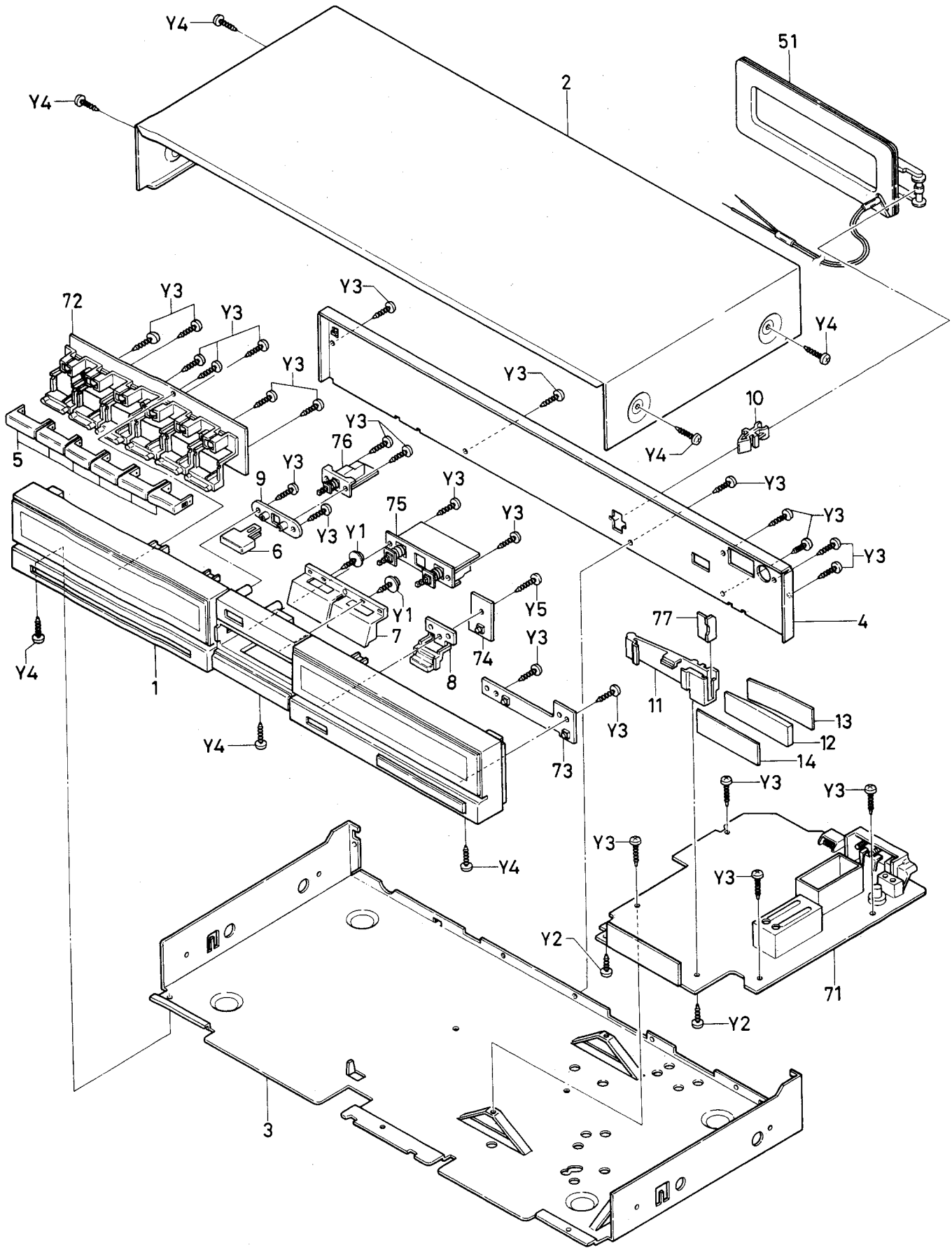
SCHEMATIC DIAGRAM



WIRING DIAGRAM



CABINET EXPLODED VIEW



PARTS LIST

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTE:

* Materials of Capacitors are abbreviated as follows;

AL ELECT .....Aluminum Electrolytic
BC CON .....Semiconductor Ceramic
CHIP BC .....Chip Semiconductor Ceramic
CHIP TAN .....Chip Tantal
ELECT .....Electrolytic
PP CON .....Polypropylene

* Tolerance of Capacitors are noted with following symboles;

J .....±5%
K.....±10%
M .....±20%
N.....±30%
P .....+100−0%
Q .....+30−10%
Z .....+80−20%

PACKING & ACCESSORIES

Ref. No.	Part No.	Description
	141-6-133T-85105	INNER CORR CASE
	141-6-145T-10500	FOAM PLASTIC CASE
	141-6-235T-35501	INNER POLYE LAMINA COVER, SET
or	141-6-235T-35506	INNER POLEY LAMINA COVER, SET
	141-6-231T-20300	INNER POLYE COVER, INST-M & ANT
	141-6-318T-30300	PAD
	141-6-409T-45200	INST MANUAL
	4-245T-00700	ANT, FM

CABINET & CHASSIS

Ref. No.	Part No.	Description
1	141-0-122T-65701	FRONT PANEL ASSY
2	141-2-111T-67600	CABINET
3	141-0-125T-39202	BOTTOM LID ASSY
4	141-2-119T-04023	BACK PANEL
5	141-2-156T-39400	CUP KNOB, PRESET
6	141-2-160T-60305	PUSH BUTTON, POWER SW
7	141-2-160T-82100	PUSH BUTTON, MODE/TUN SEL
8	141-0-160T-13800	PUSH BUTTON ASSY, BAND
9	141-2-210T-83300	BRACKET, POWER SW
10	141-2-210T-70801	BRACKET, ANT
11	141-2-210T-78800	BRACKET, LCD
12	141-2-329T-10600	REFLECTOR, LCD
13	141-2-247T-63900	SHEET, LCD REFLCTOR
14	141-2-247T-66400	SHEET, LCD SCATTER
15	141-2-352T-78000	SPACER FIBER 8X8X1.5T

FIXING PARTS

Ref. No.	Part No.	Description
Y1	BJX6S++2+8+Z1	PAN WASHER HD 2 TAPPING SCREW 2X8
Y2	BJB2S2R6+8+Z1	BIND HD 2 TAPPING SCREW 2.6X8
Y3	BJB2S++3+8+Z1	BIND HD 2 TAPPING SCREW 3X8
Y4	BJB2S++3+8+ZK	BIND HD 2 TAPPING SCREW 3X8
Y5	BJB2S++312+Z1	BIND HD 2 TAPPING SCREW 3X12

ELECTRICAL PARTS

Ref. No.	Part No.	Description
51	4-269T-00111	LOOP ANT ASSY

TUNER MAIN PCB ASSY

Ref. No.	Part No.	Description
71	141-4-290T-10103	P.C.BOARD ASSY, TUNER MAIN
	141-2-322T-18900	SHIELD PLATE, PARTS SIDE
	141-2-322T-72100	SHIELD PLATE, SOLDER SIDE
	141-2-322T-72101	SHIELD PLATE, PARTS SIDE LID
	141-2-382T-22700	TERMINAL, ANT (JK1)
	4-970T-02500	LCD (A401)
CT101	4-224R-11600	TRIMMER 8PF BK
CT151	4-224T-15500	TRIMMER 11PF WH
or	4-224T-15571	TRIMMER 11PF WH
CT152	4-224T-15500	TRIMMER 11PF WH
or	4-224T-15571	TRIMMER 11PF WH
CT153	4-224T-15400	TRIMMER 30PF GR
or	4-224T-15471	TRIMMER 30PF GR
CT154	4-224T-15400	TRIMMER 30PF GR
or	4-224T-15471	TRIMMER 30PF GR
T101	4-253T-18840	FILTER, BPF
T201	4-256T-35040	IFT
T202	4-256T-39040	IFT
T203	4-256T-26440	IFT
T204	4-255T-06946	MX COIL
T301	4-252T-11300	CHOKE COIL
T302	4-252T-11300	CHOKE COIL
L101	4-265T-56240	VHF COIL
L102	4-265T-56340	VHF COIL
L103	4-253T-15012	FILTER
L104	4-265T-57244	VHF COIL
L105	4-265T-02700	VHF COIL
L151	4-258T-44640	OSC COIL
L152	4-257T-75340	ANT COIL
L153	4-258T-58340	OSC COIL
L154	4-257T-75440	ANT COIL
L155	4-253T-15044	FILTER
X201	4-256T-84500	IF FILTER
X202	4-256T-84500	IF FILTER
X203	4-256T-84500	IF FILTER
X204	4-256T-90100	IF FILTER
X205	4-256T-83700	IF FILTER
X401	4-225T-06200	CRYSTAL 7.2MHZ
SVR201	4-220T-19476	SEMI-FIXED VR, 20K OHM (B)
or	4-222T-97576	SEMI-FIXED VR, 20K OHM (B)
SVR202	4-220T-19476	SEMI-FIXED VR, 20K OHM (B)
or	4-222T-97576	SEMI-FIXED VR, 20K OHM (B)
SVR301	4-220T-19472	SEMI-FIXED VR, 1K OHM (B)

PARTS LIST

Ref. No.	Part No.	Description
SVR301	4-222T-97572	SEMI-FIXED VR, 1K OHM (B)
SVR302	4-220T-19475	SEMI-FIXED VR, 10K OHM (B)
or	4-222T-97575	SEMI-FIXED VR, 10K OHM (B)
CN1	4-267T-17173	SOCKET 3P
CN3	4-267T-17173	SOCKET 3P
CN5	4-267T-17176	SOCKET 6P
CN7	4-267T-17177	SOCKET 7P
CN9	4-267T-17173	SOCKET 3P
CN11	4-267T-17173	SOCKET 3P
CN13	4-267T-17172	SOCKET 2P
P1	4-236T-17972	PLUG 5P
TP201	4-237T-09000	TERMINAL BOARD
TP202	4-237T-09000	TERMINAL BOARD
TP301	4-237T-09000	TERMINAL BOARD
IC201	SILA1265+++++	IC LA1265 DIP22
IC301	SILA3361+++++	IC LA3361 DIP16
IC401	SITC9302AF023	IC TC9302AF-023 QIP60
IC402	SITC9172P++++	IC TC9172P DIP16
IC403	SITC9174P++++	IC TC9174P DIP16
Q101	SF2K212+++F+T	FET 2SK212 F T SP
Q102	STC2999E++++T	TR 2SC2999 E T
Q103	STC930+E+++C1	TR 2SC930 E CONV SP
Q104	STC2999E++++T	TR 2SC2999 E T
Q105	SF2K212+++F+T	FET 2SK212 F T SP
Q151	STD1012G++++T	TR 2SD1012 G T
Q152	STD1012G++++T	TR 2SD1012 G T
Q153	STD1012G++++T	TR 2SD1012 G T
Q154	STD1012G++++T	TR 2SD1012 G T
Q155	STD1012G++++T	TR 2SD1012 G T
Q156	SF2K222+++D+T	FET 2SK222 D T NP
Q157	STC536+G+++UB	TR 2SC536 G AUD B SP
Q158	STC536+G+++UB	TR 2SC536 G AUD B SP
Q201	STC930+E+++F1	TR 2SC930 E IF SP
Q202	STC536+G+++UB	TR 2SC536 G AUD B SP
Q203	STC536+G+++UB	TR 2SC536 G AUD B SP
Q301	STC536+G+++UB	TR 2SC536 G AUD B SP
Q302	STC536+G+++UB	TR 2SC536 G AUD B SP
Q303	STD1012G++++T	TR 2SD1012 G T
Q304	STD1012G++++T	TR 2SD1012 G T
Q351	STA608+F++++B	TR 2SA608 F B SP
Q352	STC536+G+++UB	TR 2SC536 G AUD B SP
Q354	STC536+G+++UB	TR 2SC536 G AUD B SP
Q355	STA608+F++++B	TR 2SA608 F B SP
Q356	STA608+F++++B	TR 2SA608 F B SP
Q357	STC536+G+++UB	TR 2SC536 G AUD B SP
Q358	STA608+F++++B	TR 2SA608 F B SP
Q359	STC536+G+++UB	TR 2SC536 G AUD B SP
Q360	STA608+F++++B	TR 2SA608 F B SP
Q401	STC536+G+++UB	TR 2SC536 G AUD B SP
Q402	SF2K222+++D+T	FET 2SK222 D T NP
Q403	STC1571F++++T	TR 2SC1571 F T NP
Q901	STA608+F++++B	TR 2SA608 F B SP
Q902	STA608+F++++B	TR 2SA608 F B SP
D101	SCSVC211B2+U1	VARACTOR SVC211B2 AUD SP
D102	SCSVC211B2+U1	VARACTOR SVC211B2 AUD SP
D103	SCSVC211B2+U1	VARACTOR SVC211B2 AUD SP
D104	SDDS442+X+++T	DIODE DS442 X
D151	SCKV1260B++++	VARACTOR DIODE KV1260B
D301	SDDS442+X+++T	DIODE DS442 X
D302	SDDS442+X+++T	DIODE DS442 X
D351	SDDS442+X+++T	DIODE DS442 X
D401	SDDS442+X+++T	DIODE DS442 X
D402	SDDS442+X+++T	DIODE DS442 X
D403	SDDS442+X+++T	DIODE DS442 X
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D405	SDDS442+X+++T	DIODE DS442 X
D406	SDDS442+X+++T	DIODE DS442 X
D407	SDDS442+X+++T	DIODE DS442 X
D408	SDDS442+X+++T	DIODE DS442 X
D409	SDDS442+X+++T	DIODE DS442 X
D410	SDDS442+X+++T	DIODE DS442 X
D413	SDDS442+X+++T	DIODE DS442 X
D901	SDDS442+X+++T	DIODE DS442 X

Ref. No.	Part No.	Description
D902	SDDS442+X+++T	DIODE DS442 X
D903	SDDS442+X+++T	DIODE DS442 X
C101	CC+50010MASLG	CERAMIC 1PF 50V M A SL
C102	CC+50101KAYBG	CERAMIC 100PF 50V K A YB
C103	CC+50102KAYBG	CERAMIC 0.001MF 50V K A YB
C104	CC+50102KAYBG	CERAMIC 0.001MF 50V K A YB
C105	CC+505R6KASLG	CERAMIC 5.6PF 50V K A SL
C106	CC+505R6KASLG	CERAMIC 5.6PF 50V K A SL
C107	CC+501R5MACHG	CERAMIC 1.5PF 50V M A CH
C108	CC+50101KAYBG	CERAMIC 100PF 50V K A YB
C109	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C110	CE+50474MRHAF	ELECT 0.47MF 50V M R HA F
C111	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C112	CC+50050CDVKS	CERAMIC 5PF 50V C D VK
C113	CC+50100JACHG	CERAMIC 10PF 50V J A CH
C114	CC+50100JACHG	CERAMIC 10PF 50V J A CH
C115	CC+50220JRCHF	CERAMIC 22PF 50V J R CH
C116	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C117	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C118	CC+50101KAYBG	CERAMIC 100PF 50V K A YB
C119	CE+16106MRHAF	ELECT 10MF 16V M R HA F
C120	CC+50100JASL+	CERAMIC 10PF 50V J A SL
C121	CC+50101KAYBG	CERAMIC 100PF 50V K A YB
C122	CC+50620JASLG	CERAMIC 62PF 50V J A SL
C123	CC+50560JASLG	CERAMIC 56PF 50V J A SL
C152	CN100511JR++F	P P CON 510PF 100V J R
C153	CC+50680JRCHF	CERAMIC 68PF 50V J R CH F
C154	CC+508R2KAUJG	CERAMIC 8.2PF 50V K A UJ
C155	CB+25473MR++F	BC CON 0.047MF 25V M R
C158	CN100511JR++F	P P CON 510PF 100V J R
C159	CC+50820JRCHF	CERAMIC 82PF 50V J R CH F
C160	CB+25223MR++F	BC CON 0.022MF 25V M R
C161	CC+50560JASLG	CERAMIC 56PF 50V J A SL
C162	CC+50221KAYBG	CERAMIC 220PF 50V K A YB
C163	CB+25223MR++F	BC CON 0.022MF 25V M R
C201	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C202	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C203	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C204	CB+25223MR++F	BC CON 0.022MF 25V M R
C205	CB+25223MR++F	BC CON 0.022MF 25V M R
C206	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C207	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C208	CC+50101KAYBG	CERAMIC 100PF 50V K A YB
C209	CE+10107MRHAF	ELECT 100MF 10V M R HA F
C210	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C211	CE+50474MRHAF	ELECT 0.47MF 50V M R HA F
C212	CB+25473MR++F	BC CON 0.047MF 25V M R
C213	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C214	CC+50560JASLG	CERAMIC 56PF 50V J A SL
C215	CE+50474MRHAF	ELECT 0.47MF 50V M R HA F
C216	CE+25475MRHAF	ELECT 4.7MF 25V M R HA F
C217	CE+25475MRHAF	ELECT 4.7MF 25V M R HA F
C218	CE+25475MRHAF	ELECT 4.7MF 25V M R HA F
C219	CB+25223MR++F	BC CON 0.022MF 25V M R
C220	CE+16106MRHAF	ELECT 10MF 16V M R HA F
C222	CB+25223MR++F	BC CON 0.022MF 25V M R
C223	CB+25103MAXR+	BC CON 0.01MF 25V M A XR
C224	CC+50102KAYBG	CERAMIC 0.001MF 50V K A YB
C225	CB+25223MR++F	BC CON 0.022MF 25V M R
C226	CE+16106MRHAF	ELECT 10MF 16V M R HA F
C227	CC+50471JAYBG	CERAMIC 470PF 50V J A YB
C301	CE+10107MRHAF	ELECT 100MF 10V M R HA F
C302	CE+16106MRHAF	ELECT 10MF 16V M R HA F
C303	CB+25223MR++F	BC CON 0.022MF 25V M R
C304	CB+16103JA+YG	BC CON 0.01MF 16V J A Y
C305	CB+16103JA+YG	BC CON 0.01MF 16V J A Y
C306	CN100102JR++F	P P CON 1000PF 100V J R
C307	CE+50474MRHAF	ELECT 0.47MF 50V M R HA F
C308	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C309	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C310	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C311	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C312	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C313	CB+16222JAXRG	BC CON 0.0022MF 16V J A XR

PARTS LIST

Ref. No.	Part No.	Description
C314	CB+16222JAXRG	BC CON 0.0022MF 16V J A XR
C315	CC+50471JAYBG	CERAMIC 470PF 50V J A YB
C316	CC+50471JAYBG	CERAMIC 470PF 50V J A YB
C317	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C318	CE+50105MRHAF	ELECT 1MF 50V M R HA F
C319	CB+16562JAXRG	BC CON 0.0056MF 16V J A XR
C320	CB+16562JAXRG	BC CON 0.0056MF 16V J A XR
C401	CC+50200JACHG	CERAMIC 20PF 50V J A CH
C402	CC+50200JACHG	CERAMIC 20PF 50V J A CH
C403	CE+16106MRHAF	ELECT 10MF 16V M R HA F
C404	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C405	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C406	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C407	CW+50105RVLRS	NONPOLAR 1MF 50V R V LR
C408	CE+16106MRHAF	ELECT 10MF 16V M R HA F
C409	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C410	4-223T-16100	CAPACITOR 0.1F 5.5V
C411	CC+50102KAYBG	CERAMIC 0.001MF 50V K A YB
C412	CB+25103MAXR+	BC CON 0.01MF 25V M A XR
C413	CC+50560JASLG	CERAMIC 56PF 50V J A SL
C414	CC+50102KAYB+	CERAMIC 0.001MF 50V K A YB
C415	CC+50101JASL+	CERAMIC 100PF 50V J A SL
C416	CC+50101JASL+	CERAMIC 100PF 50V J A SL
C417	CC+50101JASL+	CERAMIC 100PF 50V J A SL
C901	CE+16227MRHAF	ELECT 220MF 16V M R HA F
C902	CE+50474MRHAF	ELECT 0.47MF 50V M R HA F
C903	CE+16106MRHAF	ELECT 10MF 16V M R HA F
C904	CB+16103MA+YG	BC CON 0.01MF 16V M A Y
C905	CC+50102KAYBG	CERAMIC 0.001MF 50V K A YB
R101	401 024 7707	CARBON 100K JA 1/6W
R102	401 024 6403	CARBON 10 JA 1/6W
R103	401 012 7009	CARBON 10K JA 1/4W
R104	401 026 3905	CARBON 330 JA 1/6W
R105	401 012 7009	CARBON 10K JA 1/4W
R106	401 027 0507	CARBON 470K JA 1/6W
R107	401 026 3905	CARBON 330 JA 1/6W
R108	401 012 7009	CARBON 10K JA 1/4W
R109	401 026 4902	CARBON 330K JA 1/6W
R110	401 026 1000	CARBON 2.7K JA 1/6W
R111	401 026 3905	CARBON 330 JA 1/6W
R112	401 026 3905	CARBON 330 JA 1/6W
R114	401 026 3905	CARBON 330 JA 1/6W
R115	401 027 2105	CARBON 56 JA 1/6W
R116	401 025 7805	CARBON 2.2K JA 1/6W
R117	401 024 8001	CARBON 1M JA 1/6W
R118	401 027 2105	CARBON 56 JA 1/6W
R119	401 026 3905	CARBON 330 JA 1/6W
R120	401 026 4308	CARBON 3.3K JA 1/6W
R152	401 025 8208	CARBON 22K JA 1/6W
R153	401 012 7009	CARBON 10K JA 1/4W
R154	401 027 9302	CARBON 820K JA 1/6W
R155	401 026 4308	CARBON 3.3K JA 1/6W
R156	401 026 4308	CARBON 3.3K JA 1/6W
R157	401 026 4308	CARBON 3.3K JA 1/6W
R158	401 026 4308	CARBON 3.3K JA 1/6W
R159	401 026 4308	CARBON 3.3K JA 1/6W
R160	401 012 4503	CARBON 100 JA 1/4W
R161	401 024 6700	CARBON 100 JA 1/6W
R162	401 025 3807	CARBON 180 JA 1/6W
R163	401 024 8001	CARBON 1M JA 1/6W
R164	401 027 3003	CARBON 56K JA 1/6W
R167	401 027 0507	CARBON 470K JA 1/6W
R168	401 024 6403	CARBON 10 JA 1/6W
R169	401 027 3003	CARBON 56K JA 1/6W
R170	401 024 8001	CARBON 1M JA 1/6W
R201	401 027 2303	CARBON 560 JA 1/6W
R202	401 024 7004	CARBON 1K JA 1/6W
R203	401 027 0507	CARBON 470K JA 1/6W
R204	401 026 3905	CARBON 330 JA 1/6W
R205	401 026 3905	CARBON 330 JA 1/6W
R206	401 024 7400	CARBON 10K JA 1/6W
R207	401 026 4605	CARBON 33K JA 1/6W
R208	401 024 6700	CARBON 100 JA 1/6W

Ref. No.	Part No.	Description
R209	401 026 4605	CARBON 33K JA 1/6W
R210	401 016 2604	CARBON 220 JA 1/4W
R211	401 027 3201	CARBON 560K JA 1/6W
R212	401 027 3003	CARBON 56K JA 1/6W
R213	401 024 7707	CARBON 100K JA 1/6W
R214	401 016 3809	CARBON 2.2K JA 1/4W
R215	401 016 3809	CARBON 2.2K JA 1/4W
R216	401 026 4308	CARBON 3.3K JA 1/6W
R217	401 027 3003	CARBON 56K JA 1/6W
R218	401 024 7707	CARBON 100K JA 1/6W
R219	401 024 7400	CARBON 10K JA 1/6W
R220	401 024 7400	CARBON 10K JA 1/6W
R221	401 024 7400	CARBON 10K JA 1/6W
R224	401 021 3009	CARBON 5.6K JA 1/4W
R225	401 024 7707	CARBON 100K JA 1/6W
R301	401 018 2800	CARBON 330 JA 1/4W
R302	401 026 9907	CARBON 4.7K JA 1/6W
R303	401 026 9907	CARBON 4.7K JA 1/6W
R304	401 024 7400	CARBON 10K JA 1/6W
R305	401 027 5502	CARBON 6.8K JA 1/6W
R306	401 024 7004	CARBON 1K JA 1/6W
R307	401 027 3003	CARBON 56K JA 1/6W
R308	401 012 7009	CARBON 10K JA 1/4W
R309	401 024 9701	CARBON 12K JA 1/6W
R310	401 024 9701	CARBON 12K JA 1/6W
R311	401 024 9701	CARBON 12K JA 1/6W
R312	401 024 9701	CARBON 12K JA 1/6W
R313	401 027 3201	CARBON 560K JA 1/6W
R314	401 027 3201	CARBON 560K JA 1/6W
R315	401 025 7805	CARBON 2.2K JA 1/6W
R316	401 025 7805	CARBON 2.2K JA 1/6W
R317	401 026 0607	CARBON 270 JA 1/6W
R318	401 026 0607	CARBON 270 JA 1/6W
R319	401 024 7707	CARBON 100K JA 1/6W
R320	401 024 7707	CARBON 100K JA 1/6W
R321	401 026 4308	CARBON 3.3K JA 1/6W
R322	401 026 4308	CARBON 3.3K JA 1/6W
R324	401 024 7400	CARBON 10K JA 1/6W
R351	401 024 7707	CARBON 100K JA 1/6W
R352	401 025 2305	CARBON 150K JA 1/6W
R353	401 024 7707	CARBON 100K JA 1/6W
R355	401 012 8105	CARBON 100K JA 1/4W
R357	401 027 3003	CARBON 56K JA 1/6W
R358	401 024 7400	CARBON 10K JA 1/6W
R359	401 025 2305	CARBON 150K JA 1/6W
R360	401 024 7400	CARBON 10K JA 1/6W
R361	401 027 3003	CARBON 56K JA 1/6W
R362	401 024 7400	CARBON 10K JA 1/6W
R363	401 025 2305	CARBON 150K JA 1/6W
R364	401 021 4105	CARBON 56K JA 1/4W
R365	401 024 7400	CARBON 10K JA 1/6W
R366	401 025 2305	CARBON 150K JA 1/6W
R367	401 024 7707	CARBON 100K JA 1/6W
R368	401 024 7707	CARBON 100K JA 1/6W
R369	401 024 7707	CARBON 100K JA 1/6W
R401	401 091 9307	CARBON 120 JB 1/4W
R402	401 024 9305	CARBON 1.2K JA 1/6W
R403	401 024 7004	CARBON 1K JA 1/6W
R405	401 025 7805	CARBON 2.2K JA 1/6W
R406	401 027 2303	CARBON 560 JA 1/6W
R407	401 026 4308	CARBON 3.3K JA 1/6W
R408	401 025 1605	CARBON 1.5K JA 1/6W
R409	401 024 7400	CARBON 10K JA 1/6W
R411	401 021 4105	CARBON 56K JA 1/4W
R412	401 021 4105	CARBON 56K JA 1/4W
R413	401 027 3201	CARBON 560K JA 1/6W
R414	401 024 6700	CARBON 100 JA 1/6W
R415	401 024 7400	CARBON 10K JA 1/6W
R416	401 024 7400	CARBON 10K JA 1/6W
R417	401 024 7400	CARBON 10K JA 1/6W
R418	401 024 7400	CARBON 10K JA 1/6W
R419	401 021 0701	CARBON 56 JA 1/4W
R420	401 012 8105	CARBON 100K JA 1/4W
R421	401 012 8105	CARBON 100K JA 1/4W

PARTS LIST

Ref. No.	Part No.	Description
R422	401 027 3201	CARBON 560K JA 1/6W
R423	401 021 1906	CARBON 560 JA 1/4W
R424	401 025 1902	CARBON 15K JA 1/6W
R425	401 026 4308	CARBON 3.3K JA 1/6W
R901	401 024 7707	CARBON 100K JA 1/6W
R902	401 024 6700	CARBON 100 JA 1/6W
R903	401 025 8208	CARBON 22K JA 1/6W
R904	401 012 8105	CARBON 100K JA 1/4W
R905	401 024 6700	CARBON 100 JA 1/6W
R906	401 027 9302	CARBON 820K JA 1/6W
R907	401 026 9907	CARBON 4.7K JA 1/6W
R908	401 026 4308	CARBON 3.3K JA 1/6W

PRESET SWITCH PCB ASSY

Ref. No.	Part No.	Description
72	141-4-290T-10200	P.C.BOARD ASSY, PRESET SW
	141-2-210T-82600	BRACKET, SW & LED
S404	4-238T-69800	SWITCH, PRESET 1
or	4-238T-84673	SWITCH, PRESET 1
S405	4-238T-69800	SWITCH, PRESET 2
or	4-238T-84673	SWITCH, PRESET 2
S406	4-238T-69800	SWITCH, PRESET 3
or	4-238T-84673	SWITCH, PRESET 3
S407	4-238T-69800	SWITCH, PRESET 4
or	4-238T-84673	SWITCH, PRESET 4
S408	4-238T-69800	SWITCH, PRESET 5
or	4-238T-84673	SWITCH, PRESET 5
S409	4-238T-69800	SWITCH, PRESET 6
or	4-238T-84673	SWITCH, PRESET 6
CN6	4-267T-17177	SOCKET 7P
CN8	4-267T-17177	SOCKET 7P
D451	SLSLP238FB5PG	LED SLP238F-51P B GR, PRESET 1
D452	SLSLP238FB5PG	LED SLP238F-51P B GR, PRESET 2
D453	SLSLP238FB5PG	LED SLP238F-51P B GR, PRESET 3
D454	SLSLP238FB5PG	LED SLP238F-51P B GR, PRESET 4
D455	SLSLP238FB5PG	LED SLP238F-51P B GR, PRESET 5
D456	SLSLP238FB5PG	LED SLP238F-51P B GR, PRESET 6

UP/DOWN SWITCH PCB ASSY

Ref. No.	Part No.	Description
73	141-4-290T-10300	P.C.BOARD ASSY, UP/DOWN SW
S401	4-238T-70873	SWITCH, UP
or	4-238T-90173	SWITCH, UP
S402	4-238T-70873	SWITCH, DOWN
or	4-238T-90173	SWITCH, DOWN
CN2	4-267T-17174	SOCKET 4P

BAND SWITCH PCB ASSY

Ref. No.	Part No.	Description
74	141-4-290T-10400	P.C.BOARD ASSY, BAND SW
S403	4-238T-70873	SWITCH, BAND
or	4-238T-90173	SWITCH, BAND
CN4	4-267T-17173	SOCKET 3P

MODE SWITCH PCB ASSY

Ref. No.	Part No.	Description
75	141-4-290T-10500	P.C.BOARD ASSY, MODE SW
S301	4-248T-30300	SWITCH, MODE·TUN SELECT
CN10	4-267T-17173	SOCKET 3P

POWER SWITCH PCB ASSY

Ref. No.	Part No.	Description
76	141-4-290T-10600	P.C.BOARD ASSY, POWER SW
S901	4-238T-83100	PUSH SWITCH, POWER
CN12	4-267T-17173	SOCKET 3P

LAMP PCB ASSY

Ref. No.	Part No.	Description
77	141-4-290T-10700	P.C.BOARD ASSY, LAMP
	141-2-329T-09300	REFLECTOR
PL901	4-612T-17400	LAMP

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